








# Work Order ID 67368


Wednesday, March 16, 2011 1:55:31 PM

Page 1

|                |           |            |   |   |               |   |
|----------------|-----------|------------|---|---|---------------|---|
| Item ID:       | D2617-5   | Accept     |  | Setup   | Start         |  |
| Revision ID:   |           |            |   |   | Stop          |  |
| Item Name:     | Spacer    |            |   |   |               |   |
| Start Date:    | 3/17/2011 | Start Qty: | 60.00   |  | Cust Item ID: |   |
| Required Date: | 3/31/2011 | Req'd Qty: | 60.00   |  | Customer:     |   |
| Reference:     |           |            |   |   |               |   |


|            |               |           |       |          |            |  |       |  |     |       |   |
|------------|---------------|-----------|-------|----------|------------|--|-------|--|-----|-------|---|
| Approvals: | Process Plan: | <i>mf</i> | Date: | 11-03-16 | Tooling:   |  | Date: |  | Run | Start |  |
|            | QC:           |           | Date: |          | SPC (Y/N): |  | Date: |  |     | Stop  |  |

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| <b>Draw Nbr</b>                | <b>Revision Nbr</b>      |                      |         |        |              |               |               |                  |                |
| D2617                          | Rev D2                   |                      |         |        |              |               |               |                  |                |

|  |  |      |  |  |  |  |  |  |  |
|--|--|------|--|--|--|--|--|--|--|
| 100  |  | 0.00 |  |  |  |  |  |  |  |
|  | Hardinge CNC LATHE SMALL                             |      |  |  |  |  |  |  |  |
| Hardinge   | <b>Memo</b>  | 0.00 |  |  |  |  |  |  |  |
| Hardinge CNC Lathe Small   | 1-Machine as per Folio FA438 and Dwg D2617-02-Deburr |      |  |  |  |  |  |  |  |


*11-4-7*

*60*

|  |   |      |  |  |  |  |  |  |  |
|--|---|------|--|--|--|--|--|--|--|
| 110  |   | 0.00 |  |  |  |  |  |  |  |
|  | QC2- Inspect parts off machine FAI/FAIB |      |  |  |  |  |  |  |  |
| QC   | <b>Memo</b>                             | 0.00 |  |  |  |  |  |  |  |
| Quality Control  |   |      |  |  |  |  |  |  |  |

*11-4-7*

*60*

|  |                                   |      |  |  |  |  |  |  |  |
|--|-----------------------------------|------|--|--|--|--|--|--|--|
| 120  |                                   | 0.00 |  |  |  |  |  |  |  |
|  | QC8- Inspect parts - second check |      |  |  |  |  |  |  |  |
| QC   | <b>Memo</b>                       | 0.00 |  |  |  |  |  |  |  |
| Quality Control  |                                   |      |  |  |  |  |  |  |  |

*11-4-7*

*60*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 67368**

Wednesday, March 16, 2011 1:55:31 PM



Page 2

Item ID: D2617-5

Accept



Setup Start



Revision ID:

Stop



Item Name: Spacer

Start Date: 3/17/2011 Start Qty: 60.00



Cust Item ID:

Required Date: 3/31/2011 Req'd Qty: 60.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

| Sequence ID/<br>Work Center ID          | Operation<br>Description                                     | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty                 | Reject<br>Number | Insp.<br>Stamp |
|---|--|----------------------|---------|--------|--------------|---------------|-------------------------------|------------------|----------------|
| 130<br><br>HandFinish<br>Hand Finishing | Chemical Conversion Coat per QSI005 4.1<br><br>Memo          | 0.00<br><br>0.00     |         |        |              | 60            | 11-4-8                        |                  |                |
| 140<br><br>QC<br>Quality Control        | QC3- Inspect Part Finish<br><br>Memo                         | 0.00<br><br>0.00     |         |        |              | 60            | 11-04-08<br><del>11-4-8</del> |                  |                |
| 150<br><br>Packaging<br>Packaging       | Identify as per dwg & Stock Location: <u>019</u><br><br>Memo | 0.00<br><br>0.00     |         |        |              |               |                               |                  | <u>60</u>      |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 67368**

Wednesday, March 16, 2011 1:55:31 PM

Page 3

Item ID: D2617-5

Accept

Setup Start

Revision ID:

Stop

Item Name: Spacer

Start Date: 3/17/2011 Start Qty: 60.00

Cust Item ID:

Required Date: 3/31/2011 Req'd Qty: 60.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/4/11 [Signature]

MF  
11-04-11

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, March 16, 2011 1:55:28 PM

Page 1

Work Order ID: 67368



Parent Item: D2617-5



Parent Item Name: Spacer

Start Date: 3/17/2011

Required Date: 3/31/2011

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP ☐ H ☐ 04.07.14 ☐ Reformat; added step 5 ☐ KJ/JLM ☐

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M6061T6T0.500W.058<br>          |                        | Purchased     | No          |                     |                  | 100             | f                  | 138.5000       | 0.0195      | 1.331579     |               |                |        |
| 6061-T6 RD Tube .500 x.058W     |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |



*Handwritten: 014/7*

Location

Loc Qty

Loc Code

MAT014

138.5

114852

8.5

117084

130

*Handwritten: 1.7 Rf*

M6061T6T0.500W.058  
M117084

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries





| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

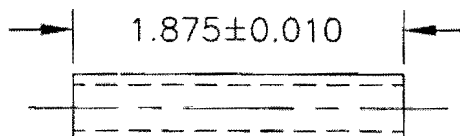
| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



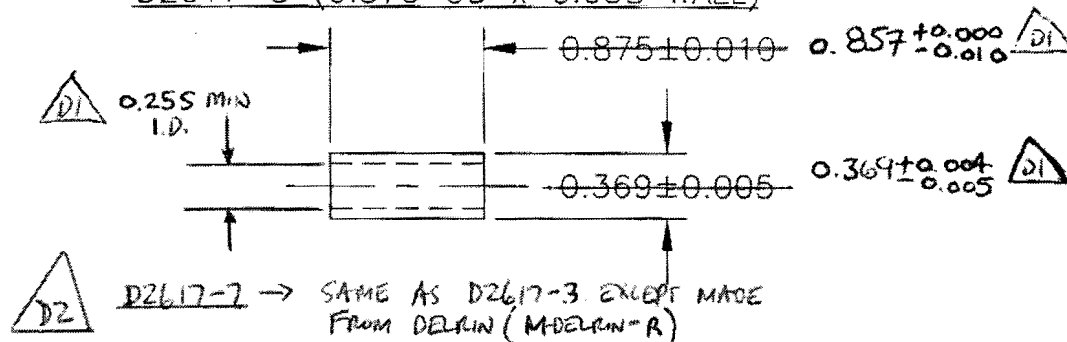
|         |          |          |          |   |                        |
|---------|----------|----------|----------|---|------------------------|
| DESIGN  | BW       | DRAWN BY | CP       | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED | #        | APPROVED | #        | DRAWING NO.<br>D2617                              | REV. D<br>SHEET 1 OF 1 |
| DATE    | 01.07.04 |          |          | TITLE<br>BUSHING                                  | SCALE<br>1:1           |
| D2      | 04.09.10 | #        | CP       | ADD D2617-7                                       |                        |
| A       | 96.10.08 |          |          | NEW ISSUE   |                        |
| B       | 97.05.08 |          |          | .875 WAS 1.125                                    |                        |
| C       | 97.06.04 |          |          | 0.369 DIA WAS 0.375                               |                        |
| D       | 01.07.04 |          |          | ADD MAT'L SPEC AND TOL./DIM. NOTE                 |                        |
| D1      | CP       | #        | 04.07.12 | CORRECT TOLERANCE (NCR 779)                       |                        |

D2617-1 (0.375 OD x 0.058 WALL)

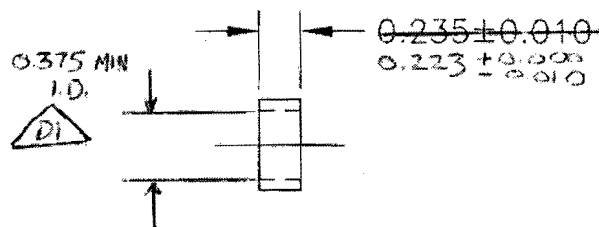


# 67368

D2617-3 (0.375 OD x 0.058 WALL)



D2617-5 (0.500 OD x 0.058 WALL)



RELEASED  
01.07.05

NOTES:

- 1) MATERIAL: 5052-H32 (QQ-A-225/7 OR WW-T-700/4)  
OR 6061-T6 (QQ-A-225/8, QQ-A-200/8, OR WW-T-700/6)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH, ALODINE PER QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

Copyright © 1996 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries